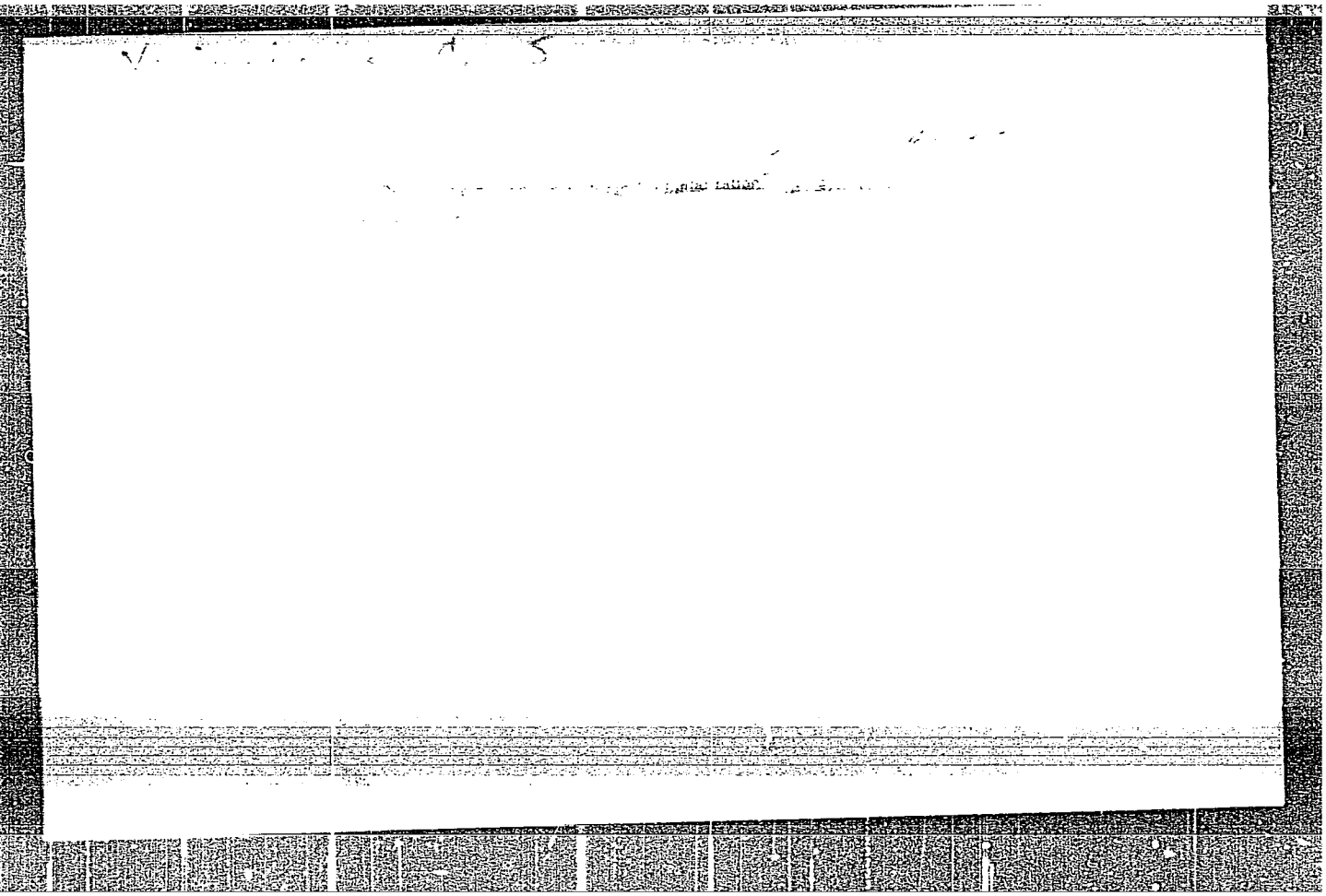
YAKIMAVICHUS, CH. S.

YAKIMAVICHUS, CH. S. -- "Electric Metal Plating and the Possibility of Using it for the Food Industry Equipment." Min Agriculture USSR, Lithuanian Agricultural Academy, Kaunas, 1956. (Dissertation for the Degree of Candidate of Technical Sciences)

SO: Knizhnaya Letopis' No 43, October 1956, Moscow



SOV/137-58-7-15242

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 187 (USSR)

AUTHOR: Yakimavichus, Ch. S.

TITLE: Novel Method for Electrometallization Decreases Oxidation of Metal (Novyy sposob elektrometallizatsii, umen'shayushchiy okisleniye metalla)

PERIODICAL: Tr. Kaunassk. politekhn in-ta, 1957, Vol 7, pp 271-277

ABSTRACT: The author describes the construction of a nozzle capable of producing a combined jet employed for spraying of metal during (electro-) metallization. The jet is composed of two concentric streams: An internal stream (of small diameter) of N_2 or of an inert gas, and an external (large-diameter) stream of air surrounding the internal stream concentrically. At an excess pressure of 4 atm, the consumption of N_2 amounts to approximately 0.165 m^3/min. The employment of the combined jet reduces the oxidation and burn-off of the alloying elements in the steel (e.g., the combustion of Cr from the steel Kh18N9 diminished by 33-45%) and increases the corrosion resistance of Al and stainless-steel coatings by a factor of 3-4 as compared with the corrosion resistance of identical coatings sprayed on with the aid of air only. M.M.

Card 1/1

1. Spray nozzles--Design 2. Spray nozzles--Performance
3. Metal coatings--Corrosion

S/137/62/000/002/131/144
A052/A101

AUTHOR: Yakimavičius, C.

TITLE: The effect of air parameters on the properties of electro-sprayed metal coatings

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 2, 1962, 58, abstract 2E325 ("Kauno politechn. inst. darbai, Tr. Kaunassk. politekhn. in-ta", 1961, 14, no. 3, 53-59, Lithuanian, Russian summary)

TEXT: On the basis of the free air jet theory it is proved theoretically that the air jet velocity, and consequently the velocity of metal particles, depends to the highest degree on the air nozzle diameter and only to a slight degree on the air pressure. It is pointed out that in order to improve the properties of metal coatings, it is necessary first of all to increase the air nozzle diameter. 5 - 6atm is the optimum air pressure. The theoretical conclusions are confirmed by experimental data showing the predominant effect of the air nozzle diameter on such properties of the layer as impermeability, compression strength, adhesion strength with the base. Temperature measurement of metal particles has shown, that the change of the air nozzle diameter has

Card 1/2

S/137/62/000/002/131/144
A052/A101

The effect of air parameters ...

no practical influence on the temperature.

V. Tarisova

[Abstracter's note: Complete translation]

Card 2/2

KORNILOV, Yu.D., kand.ekon.nauk, dots.; Cheredkov, S.N., kand.vet.nauk; YAKIMCHIK, V.F., zootekhnik

Reducing the cost of artificial insemination of cows. Zhivotnovodstvo 21 no.6:23-25 Je '59. (MIRA 12:8)

1. Vitebskiy veterinarnyy institut (for Kornilov). 2. Zaveduyushchiy Vitebskoy gosudarstvennoy mezhrayonnoy stantsiyey iskusstvennogo osemeneniya zhivotnykh (for Cheredkov).
(White Russia--Artificial insemination)

YAKIMCHUK, I.

"Repeated Reconditioning of Worn Tools," Za Ekonomiyu Materialov 5 (Dec 1952) pp 72/74.

Evaluation B-66181, and B-77406, 21 Jul 54

YAKIMCHUK, I.L., kand.veterinarnykh nauk; TIKHOMIROVA, O.N.

Optimal dates for the insemination of cows after calving.
Veterinariia 39 no.12:40-42 D '62. (MIRA 16:6)

1. Moskovskaya veterinarnaya akademiya. 2. Starshiy zootekhnik uchebnogo khozyaystva "Yur'yevskoye" Naro-Fominskiy rayon, Moskovskoy obl. (for Tikhomirova).
(Artificial insemination)
(Cows)

BAKHTOV, S.G.; PARSHUTIN, G.V.; RODIN, I.I.; TARASOV, V.R.; YAKIMCHUK, I.L.; BYRDINA, A.S., red.

[Practical manual on veterinary obstetrics, gynecology, and artificial insemination of farm animals] Praktikum po veterinarnomu akusherstvu, ginekologii i iskusstvennomu osemeneniiu sel'sko-khoziaistvennykh zhivotnykh. [By] S.G.Bakhtov i dr. Moskva, Kolos, 1965. 295 p. (MIRA 18:4)

YAKIMCHUK, I.N., inzh. po mekhanizatsii

Use of containers for shipping mail on steamship routes. Vest. sviazi 23 no.9:18 S '63. (MIRA 16:10)

1. Primorskoye krayevoye upravleniye svyazi.

33560
S/179/61/000/006/010/011
E032/E314

10.6300 1327

AUTHORS: Klyachko, M.D. and Yakimchuk, L.Ye. (Moscow)

TITLE: Phase relationships during the transition of a linear system through resonance

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Otdeleniye tekhnicheskikh nauk. Mekhanika i mashinostroyeniye, no. 6, 1961, 166 - 167

TEXT: The authors point out that although the change in the amplitude on passing through resonance has been investigated both for linear and nonlinear systems, the change in the phase angles does not appear to have been discussed in the literature. They are concerned in the present paper with this problem in the case of a linear system subject to a force-function with a linearly varying frequency, i.e. with an equation of the form

$$\frac{d^2x}{dt^2} + 2\delta\frac{dx}{dt} + \omega^2 x = A \sin \frac{\beta t^2}{2} \qquad (1)$$

Card 1/5

Phase relationships ....

where δ, ω, A and β are constants. The solution is sought in the form

$$x = a \sin (1/2\beta t^2 - \vartheta) + \varepsilon u(a, \vartheta, t) \qquad (2)$$

where a is amplitude of the oscillations,
ϑ is the phase angle,
$u(a,\vartheta,t)$ is an unknown function, and
ε is a small parameter.

It is assumed that since the frequency of the force-function varies slowly, the derivatives da/dt and $d\vartheta/dt$ are of the order of ε and that the damping coefficient δ is also of this order of magnitude. Subject to these assumptions, i.e. neglecting terms of the order ε^2, it is shown that Eq. (1) may be reduced to the following two equations

Card 2/5

Phase relationships ....

$$\frac{d\mu}{d\tau} = -\frac{\mu h}{\varkappa} + \frac{1}{2\varkappa\tau}\sin\vartheta \qquad (5)$$

$$\frac{d\vartheta}{d\tau} = \frac{1}{2\mu\varkappa\tau}\left[\cos\vartheta - (1-\tau^2)\mu\right] .$$

Eqs. (5) were integrated with the aid of the "Ural" computer. The initial conditions were taken to be the values of μ and ϑ corresponding to the steady-state conditions for $\tau = 0.4$. In the calculations the prameter h was varied between 0.005 and 0.025 and the parameter $\varkappa$ between 0.0002 and 0.0064. The results of these numerical calculations are shown in Figs. 1, 2 and 3 (the numbers marked on the figures are the values of $10^4\,\varkappa$). The total increase $\Delta\vartheta$ in the phase angle on passing through resonance is given below for four values of $\varkappa$ and

Card 3/5

Phase relationships ....

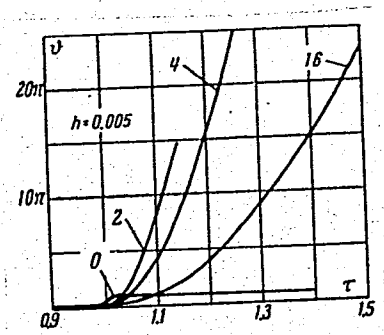
h = 0.015:

$\varkappa 10^4$	2	8	10	16
$\Delta\vartheta$	π	3π	5π	7π

There are 3 figures and 2 Soviet-bloc references.

SUBMITTED: April 11, 1961

Fig. 1:



Card 4/5

Phase relationships ....

33560
S/179/61/000/006/010/011
E032/E314

Fig. 2:

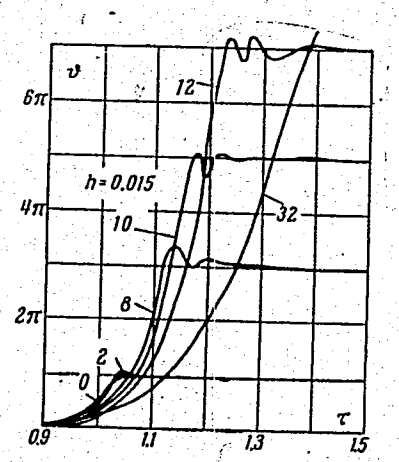
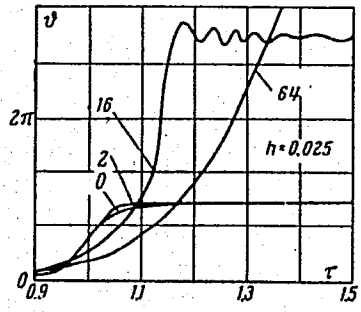


Fig. 3:



Card 5/5

YAKIMCHUK, N.A. (Ryazan')

Changes in the pia mater of the spinal cord in rheumatic fever in connection with the genesis of the spinal block. Nauch. trudy Riaz. med. inst. 14:145-150 '63.

Clinical materials on rheumatic fever of the spinal cord. Nauch. trudy Riaz. med. inst. 14:151-169 '63. (MIRA 17:5)

YAKIMCHUK, O. L.

PA 244T20

USSR/Medicine, Veterinary - Mastitis Feb 53

"Ozokerite Therapy in Cases of Acute of Chronic Forms of Mastitis in Cattle," O. L. Yakimchuk, Moscow Veter Acad

"Veterinariya" Vol 30, No 2, pp 31-37

Ozokerite (produced in the Turkmen SSR, Uzbekistan, and Western Ukraine) is a new drug in the field of veterinary medicine. Ozokerite can be successfully used in the treatment of mastitis in cows whether they are milk-producing or pregnant and irrespective of the type of bacteria that induce inflammation. One to 5 applications of ozokerite produced 100%

244T20

recovery from an acute form of mastitis; between 4 and 28 applications of ozokerite resulted in 80% to 100% recovery. Ozokerite, held at a temperature of 50° in a cuvette, may be applied to the lumbar-sacral region; the preparation should be held at a temperature of 60° or 65° for application to the udder.

244T20

YAKIMCHUK, P.P., kand.med.nauk; MILOSLAVSKIY, Ya.M., kand.med.nauk; MILOSLAVSKAYA, L.I., kand.med.nauk

Effect of nitrogen dioxide on the adrenal cortex in white rats in chronic intoxication. Gig.i san. 26 no.12:79-80 D '61. (MIRA 15:9)

1. Iz kafedry gigiyeny, kafedry fakul'tetskoy terapii Ryazanskogo meditsinskogo instituta.
(ADRENAL CORTEX) (NITROGEN OXIDES--PHYSIOLOGICAL EFFECT)

YAKIMCHUK, P.P.

Effect of nitrogen dioxide on porphyrin metabolism in white rats. Nauch. trudy Riaz. med. inst. 15:201-205 '62. (MIRA 17:5)

1. Kafedra gigiyeny (zav. kafedroy - prof. N.F.Yemel'yanov) i kafedra kommunal'noy gigiyeny TSentral'nogo instituta usovershenstvovaniye vrachey (zav. kafedroy - chlen-korrespondent AMN SSSR prof. V.A.Ryazanov).

YAKIMCHUK, P.P.; MIRONOV, I.I.

Morphological changes within the internal organs of white rats in chronic intoxication with small doses of nitrogen dioxide. Nauch. trudy Riaz. med. inst. 15:205-210 '62. (MIRA 17:5)

1. Kafedra gigiyeny (zav. kafedroy - prof. N.F.Yemel'yanov) i kafedra kommunal'noy gigiyeny (zav. kafedroy - chlen-korrespondent AMN SSSR prof. V.A.Ryazanov) Tsentral'nogo instituta usovershenstvovaniya vrachey i kafedra patologicheskov anatomii (zav. kafedroy - prof. V.K.Beletskiy) Ryazanskogo meditsinskogo instituta imeni Pavlova.

YAKIMCHUK, P.P., assistent

Materials for a basis for the maximum allowable concentration of nitrogen peroxide in the air. Pred. dop. kontsent. atmosf. zagr. no.7:66-75'63. (MIRA 16:10)

1. Iz kafedry gigiyeny Ryazanskogo meditsinskogo instituta imeni akademika I.P.Pavlova i kafedry kommunal'noy gigiyeny TSentral'nogo instituta usovershenstvovaniya vrachey.
(AIR —POLLUTION) (NITROGEN OXIDES)

the Hg s 2.4–2.5 sec. The temp. is maintained with an accuracy of 1°. For one series of polarograms 5–10 ml. of soln. is used. O causes a sharp peak at the start of the polarogram; the soln. is aired for 20–30 min. with H. To calc. the age of the mineral it is not necessary to know sepa-

YAKIMCHUK, V.

YAKIMCHUK, V.; ZAKHARCHENKO, L.

Conversion to pneumatic transportation in mills of the Sumy Province Milling Trust. Muk.-elev.prom.21 no.2:26-27 F '55. (MLRA 8:3)

1. Sumskoy oblmel'trest.
(Pneumatic-tube transportation) (Grain milling machinery)

YAKIMCHYK, K.V.

Origin of some bioelectric potentials [with summary in English]. Biofizika 4 no.2:250-253 '59. (MIRA 12:4)

1. Turkmenskiy gosudarstvennyy meditsinskiy institut, Ashkhabad.
(ELECTROPHYSIOLOGY,
origin of bio-potentials (Rus))

PUSHKIN, P.; YAKIMENKO, A.; CHEMBAROV, M.; MARKIN, S.

Labor productivity indices in the artificial leather industry. Biul.nauch.inform: trud i zar.plata 3 no.7: 9-15 '60. (MIRA 13:8)

(Leather, Artificial)
(Labor productivity)

YAKIMENKO, A.

YAKIMENKO, A.

Tripper-type weighted take-ups for belt conveyers. TSvet. met. 26 no.2:78-79 Mr-Ap '53. (MLRA 10:9)

1. Glavnyy mekhanik kombinata Yuzhuralnikel'.
(Conveying machinery)

YAKIMENKO, A.A., mashinist.

All the engineers of the Ural'sk locomotive shed run heavy-weight trains. Elek. i tepl. tiaga no.11:25 N '57. (MLRA 10:11)

1. Depo Ural'sk Orenburgskoy dorogi.
(Locomotive engineers)

PUSHKIN, P.S., kand.tekhn.nauk; YAKIMENKO, A.D., mladshiy nauchnyy sotrudnik

Factors of the growth of labor productivity in the manufacture of sole rubber. Kozh.-obuv.prom. 3 no.7:9-12 Jl '61. (MIRA 14:9)
(Boots and shoes, Rubber)
(Shoe industry--Labor productivity)

PUSHKIN, P.S., kand.tekhn.nauk, dotsent; YAKIMENKO, A.D., inzh.; POLYAKOVA, L.N., inzh.; CHEMBAROV, M.I., inzh.

Theoretical measurement of production volume in rubber sole factories. Izv.vys.ucheb.zav.; tekh.leg.prom. no.6:13-22 '61. (MIRA 14:12)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi. Rekomendovana kafedroy ekonomiki promyshlennosti i organizatsii proizvodstva Kiyevskogo tekhnologicheskogo instituta legkoy promyshlennosti.
(Boots and shoes, Rubber)
(Production standards)

PUSHKIN, P.S., kand.tekhn.nauk, dotsent; YAKIMENKO, A.D., inzh.; CHEMBAROV, M.I., inzh.; MARKIN, S.S., inzh.; PARASHINA, T.G., inzh.; ALEKSEYEVA, N.N., inzh.; POLYAKOVA, L.N., inzh.

Labor productivity potentials and growth factors in the artificial leather industry during the current seven year period. Izv.vys.ucheb.zav.;tekh.leg.prom. no.2:31-38 '62. (MIRA 15:5)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi. Rekomendovana kafedroy ekonomiki promyshlennosti i organizatsii proizvodstva Kiyevskogo tekhnologicheskogo institut[redacted] promyshlennosti.
(Leather industry--Labor productivity)

YAKIMENKO, A.F.

Case of subcutaneous emphysema in labor. Akush. i gin. no.5: 87 S-O '54. (MLRA 7:12)

1. Iz Chechel'nikskoy rayonnoy bol'nitsy Vinnitskoy oblasti
(LABOR, complications,
emphysema, subcutaneous)
(EMPHYSEMA,
subcuteneous, in labor)

1. YAKIMENKO, A. F.

2. USSR (600)

4. Millet

7. Ripening process and the harvesting of millet. Sel. i sem. 19 no. 10, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January, 1953. Unclassified.

YAKIMENKO, A.F., kand.sel'skokhozyaystvennykh nauk

Effect of sowing methods on the yield and quality of millet and buckwheat. Zemledelie 25 no.4:50-52 Ap '63. (MIRA 16:5)
(Millet) (Buckwheat)

YAKIMENKO, A.F.

Combination of uterine and bilateral tubal pregnancy. Akush. i gin. 39 no.3:126 My-Je'63 (MIRA 17:2)

1. Iz akusherako-ginekologicheskogo otdeleniya Shpikovskoy rayonnoy bol'nitsy (glavnyy vrach S.R. Kaplun) Vinnitskoy oblasti.

YAKIMENKO, A.F., kand. sel'skokhoz. nauk

Sowing dates and methods for groats. Zemledelie 27 no.5:59-60 My '65. (MIRA 18:6)

1. Khar'kovskiy sel'skokhozyaystvennyy institut.

COUNTRY : USSR
CATEGORY : Cultivated Plants. M
Grains. Legumes. Tropical Cereals.
ABS. JOUR. : RZhBiol., No. 3, 1959, No. 10942

THOR : Yakimenko, A. F.
ST. : Khar'kov Agricultural Institute
TITLE : The Methods and Rates of Sowing Millet.

ORIG. PUB. : Zemledeliye, 1958, No. 5, 61-62

ABSTRACT : Khar'kov Agricultural Institute data (1954-1956) on the trial of the continuous (C) and wide-row (W) sowing of the millet Veselopodolyanskoye 367. The grain yield with W sowing was on an average for 3 years, 5.2 centners/ha lower than with C sowing. An increase in the sowing rate of the millet was accompanied by an increase in the yield in the case of both methods. The highest yield of millet from C sowing was obtained with the sowing rate of 30 kg/ha and from W sowing with the sowing rate of 25 kg/ha. The wide-row sowings of millet require

CARD: 1/2

YAKIMENKO, A.G. (Krasnodar, pereulok Suvorovskiy, d.14)

Incidence of skin cancer in Krasnodar Territory [with summary in English] Vop.onk.2 no.4:464-468 '56. (MLRA 9:12)

1. Iz Krasnodarskogo krayevogo onkologicheskogo dispansera (glav. vrach - V.M.Sokol)
(SKIN NEOPLASMS, statistics,
in Russia (Rus))

YAKIMENKO, A. K., (Veterinary Surgeon, Krasnodar, Regional Veterinary-Sanitary Station)

Certain data on the use of the native biomycin preparation

Veterinariya vol. 38, no. 10, October 1961, pp. 81-89.

YAKIMENKO, A.K.

Use of technical gastric juice. Veterinariia 42 no.12: 50-51 D '65. (MIRA 19:1)

1. Direktor Krasnodarskoy krayevoy veterinarno-sanitarnoy stantsii.

SEMKO, B.P., inzh.; YAKIMENKO, A.V.

Relation between coefficients of friction in slipping and coefficients of adhesion of the wheels of a mine loader. Vop.rud. transp. no.4:408-415 '60. (MIRA 14:3)

1. Institut gornogo dela AN USSR.
(Ore handling--Equipment and supplies) (Friction)

ACC NR: AP7001237 SOURCE CODE: UR/0439/66/045/011/1742/1743

AUTHOR: Monastyrskiy, O. A.; Yakimenko, A. V.; Burmakin, V. N.

ORG: Institute of Cytology and Genetics, Siberian Branch, Academy of Sciences SSSR, Novosibirsk (Institut tsitologii i genetiki sibirskogo otdeleniya Akademii nauk SSSR)

TITLE: Method of recording pulse and the frequency and relative depth of respiration simultaneously in small animals

SOURCE: Zoologicheskiy zhurnal, v. 45, no. 11, 1966, 1742-1743

TOPIC TAGS: animal physiology, rodent, bat, physiologic parameter, respiratory system, biologic respiration

ABSTRACT: An original method for recording pulse and the frequency and relative depth of respiration simultaneously in small animals (bats and other rodents) is described (see Figs. 1 and 2). A cage conforming to the size of the experimental animal is made by shaping 1.5 mm-thick plexiglass into a cylindrical block to which a flat bottom and doors at each end are attached. Silver electrodes are placed in the bottom so that the left front foot is on one plate and the right hind foot is on the other. Wires hooked up to the silver plates are coupled to the EKG (EKPSCh-3) lead. A groove is cut in the cage bottom at the level of

 UDC: 591.127.08

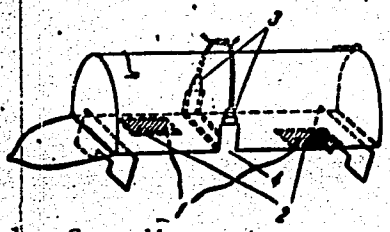
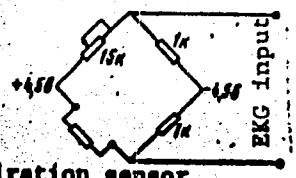


Fig. 1. Cage diagram

1 - EKG (EKPSCh-3) input; 2 - silver electrodes; 3 - bridge input; 4 - attachment for respiration sensor.



respiration sensor

Fig. 2. Diagram of the measuring bridge

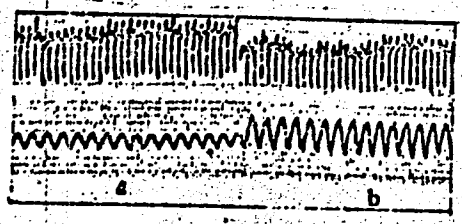


Fig. 3. Readout of pulse rare and the frequency and relative depth of respiration in Microtus arvalis at 20C (A) and 10C (B)

ACC NR: AP7001237

the tip of the animal's chest for the respiration sensor. Frequency and relative depth of respiration are converted into signals by a sensor, consisting of an elastic rubber tube filled with chemically pure, ground carbon, which records changes in chest perimeter during respiration. The silver electrodes are inserted in the tube ends and are joined to the arm of the measuring bridge by wires. A thermocouple for measuring air temperature in the cage and an opening in the rear door for insertion of a thermocouple to measure rectal temperature can be added without altering cage construction. When recording, the doors are closed and the belt of the respiration sensor is tied. A readout (see Fig. 3) made at 25 mm/sec shows pulse frequency (upper) and the frequency and depth of respiration (lower). This method permits recording physiological parameters without injury during chronic experiments. Orig. art. has: 3 figures.

SUB CODE: 06/ SUBM DATE: none/ ATD PRESS: 5112

Card 3/3

YAKIMENKO, A.V., starshiy inzhener

Effect of a change in the operating conditions on the vibration of a centrifugal fan. Sbor. trud. Inst. gor. dela AN URSR no.12:59-65 '61. (MIRA 15:11)

(Fans, Mechanical) (Vibration)

YAKIMENKO, A.Ya.; SHESTAKOV, N.I.

Work of the Krasnodar Territory Veterinary and Sanitation Station. Veterinariia 40 no.10:4-5 O'63. (MIRA 17:5)

1. Direktor Krasnodarskoy krayevoy veterinarno-sanitarnoy stantsii (for Yakimenko). 2. Starshiy veterinarnyy vrach Krasnodarskoy krayevoy veterinarno-sanitarnoy stantsii (for Shestakov).

YAKIMENKO, D.I. (Yalta)

Treatment of certain neurotrophic skin diseases with ultraviolet rays and ultrahigh-frequency currents in small doses. Vest.derm.i ven. 35 no.3:33-36 Mr '61. (MIRA 14:4)
(SKIN--DISEASES) (ULTRAVIOLET RAYS--THERAPEUTIC USE)

YAKIMENKO, F.

Mustard as a valuable crop. Zemledelie 27 no.9:67 S '65.
(MIRA 18:10)

1. Glavnyy agronom kolkhoza imeni Il'icha, Sarpinskogo rayona, Kalmytskoy ASSR.

YAKIMENKO, F.I., mashinist

Changes proposed by the operating personnel concerning the design of the VL60 electric locomotive. Elek. i tepl. tiaga 7 no.4: 13-14 Ap '63. (MIRA 16:5)

1. Depo Krasnoyarsk Vostochno-Sibirskoy dorogi.
(Electric locomotives)

YAKIMENKO, F. L.

Acorns

Late fall sowing of acorns. F. L. Yakimenko, Les i Step' 4 no. 6, Je 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

YAKIMENKO, F. [L.]

"Autumn planting of the acorn." p. 334. GORSKO STOPANSTVO, Vol 8, #7, Sept 1952, Bulgaria)

SO: Monthly List of ~~Russian~~ East European Accessions, Vol 2 #8 Library of Congress, August 1953, Uncl.

1. YAKIMENKO, F. L.

2. USSR (600)

4. Nuts - Kurgannaya District

7. Nut orchards on collective farms of Kurgannaya District. Les i step' 5, No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, April 1953. Unclassified.

YAKIMENKO, G., prepodavatel' tekhnicheskikh distsiplin pedinstituta (g. Krivoy Rog); YANUM, T. [Janums, T.], prepodavatel' (Yaunaglona, Latviyskaya SSR); KAMANITSYN, A., prepodavatel' avtoshkoly (g.Kostroma)

Discussing the article "From the simple to the complex." Za rul. 20 no.7:30 Jl '62. (MIRA 15:7)
(Automobile drivers)

MONAKHOV, N.I., inzh., glavnyy red.; TURIANSKIY, M.A., inzh., zam. glavnogo red.; BERKOVICH, M.G., inzh., red.sbornika; YAKIMENKO, G.A., red.sbornika; KHAVIN, B.N., red.izd-va; GILENSON, P.G., tekhn.red.

[Collection No.8 of consolidated cost indexes of buildings and structures of the buildings materials industry to be used in the revaluation of capital assets] Sbornik no.8 ukrupnennykh pokazatelei stoimosti zdanii i sooruzhenii promyshlennosti stroitel'nykh materialov dlia pereotsenki osnovnykh fondov. Moskva, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.materialam, 1959. 134 p. (MIRA 12:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy komitet po delam stroitel'stva.
(Building materials industry)

RUBINSKIY, Yu.M., dotsent, kand.ekonom.nauk; VOROB'YEVA, A.I., starshiy nauchnyy sotrudnik; PROKOPENKO, N.D., starshiy nauchnyy sotrudnik; DULIN, G.V., starshiy nauchnyy sotrudnik; KRYZHKO, I.D., starshiy nauchnyy sotrudnik. Prinimali uchastiye: KACHKO, Yu.Ya., mladshiy nauchnyy sotrudnik; FILIMONOVA, V.F., mladshiy nauchnyy sotrudnik; YAKIMENKO, G.S., mladshiy nauchnyy sotrudnik; VEREMEY, Ye.N., starshiy prepodavatel'; SLUNITSYN, D.I., student. MIROSHNICHENKO, V.D., red.izd-va; KOROVENKOVA, Z.A., tekhn.red.

[Time study research in coal mines] Khronometrazhnye issledovaniia na ugol'nykh shakhtakh. Moskva, Ugletekhizdat, 1959. 278 p. (MIRA 13:9)

1. Dnepropetrovsk. Dnepropetrovskiy gornyy institut. 2. Dnepropetrovskiy gornyy institut (for Rubinskiy, Kachko, Filimonova, Veremey). 3. Donetskiy nauchno-issledovatel'skiy ugol'nyy institut (for Vorob'yeva, Prokopenko, Dulin, Kryzhko, Yakimenko). 4. 5-y kurs gorno-ekonomicheskoy spetsial'nosti Dnepropetrovskogo gornogo instituta im. Artema (for Slunitsyn).
(Time study) (Coal mines and mining--Production standards)

YAKIMENKO, G.S.; BARBASHIN, B.M., starshiy master blyuminga.

Metal marking in the production line. Metallurg 6 no.7:23-25 Jl '61. (MIRA 14:6)

1. Alchevskiy metallurgicheskiy zavod. 2. Zamestitel' nachal'nika obzhimnogo tsekha Alchevskogo metallurgicheskogo zavoda (for Yakimenko).

(Rolling (Metalwork))

BARBASHIN, B.M.; YAKIMENKO, G.S.

Improving the method of removing trimmings from the 1,150 slubbing mill shears. Met.i gornorud. prom. no.6:76-77 N-D '63.
(MIRA 18:1)

USSR/General Problems of Pathology. Neoplasms. U

Abs Jour: Ref Zhur-Biol., No 8, 1958, 37339.

Author : Tabachnikov, S.Y., Yakimenko, G.V.
Inst :
Title : Mediastinal Type of Bronchial Cancer.

Orig Pub: Vestn. Khirurgii, 1957, 97, No 9, 137-138.

Abstract: A case of bronchial adenocarcinoma in a 15 year old boy, the clinical picture and anatomo-pathological findings are described. An acute onset of the illness and rapidly progressing course (1½ months), absence of loss of weight and dysphagia were noted, despite the enormous size of the tumor (21 x 17 x 10 cu) occupying the greater part of the chest cavity and mediastinum.

Card : 1/1 Kotovskoy gorodskoy bol'nitsy Odesskoy oblasti.

YAKIMENKO, G.V. (Odesskaya oblast', Kotovsk, ul.Ostrovskogo, d.29)

Gastrectomy in acute gastroduodenal hemorrhage according to records of the Kotovsk District Hospital. Nov. khir. arkh. no.2:56-58 Mr-Ap '60. (MIRA 14:11)

1, Khirurgicheskoye otdeleniye (zav. - G.V.Yakimenko) Kotovskoy rayonnoy bol'nitsy Odesskoy oblasti.
(STOMACH--SURGERY) (HEMORRHAGE)

YAKIMENKO, G.V. (Kotovsk, Odesskoy oblasti,ul.Ostrovskogo,d.35)

Perforating gastroduodenal ulcers, based on materials from the Kotovsk District Hospital, Odessa Province. Klin.khir. no.8:29-31 Jl '62. (MIRA 15:11)

1. Zaveduyushchiy khirurgicheskim otdeleniyem Kotovskoy rayonnoy bol'nitsy, Odesskoy oblasti.
(PEPTIC ULCER)

USSR / Cultivated Plants. Technical. M-5

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6382

Author : Yakimenko, I. A.
Inst : Voronezh Agricultural Institute
Title : Changes in Yield and in Quality of Parental Sugar Beets According to the Disposition of Plants and the Fertilizer Bases in the Mikhaylovskiy Sovkhoz

Orig Pub : Zap. Voronezhsk. s.-kh. in-ta, 1957, 27, No 2, 269-272

Abstract : The combination of humus (before cultivation) and mineral fertilizer used in rows and of top dressing produced the heaviest roots (350 g) and the greatest planting density (100.8 thousand/ha), but the smallest saccharinity (18.8%). The introduction of phosphorous

Card 1/3

USSR / Cultivated Plants. Technical.

Abs Jour : Ref Zhur - Biologiya, No 2, 1959, No. 6382

fertilizers alone in rows and in the top dressing sharply diminished the weight of the roots (down to 210 g) but increased the saccharinity (up to 19.4%) when the density of plants was 97.9 thous/ha. Large doses of Naa are harmful in the fertilization of rows. They have an adverse effect on germination and decrease the density of plants (down to 90.5 thous/ha). The greatest density of plants (89.6 thous/ha, sic!) was obtained in beds which had a surface of 44.5 x 18 cm. The weight of the roots was 238 g and the saccharinity was 15.5%. The least density of plants (42.8 thous/ha) was observed when the plants were disposed in squares of 44.5 x 44.5 cm. The heaviest roots (350 g) and the

smallest saccharinity (15%) were observed in this case. With the variant of 44.5 x 44.5 cm, intermediate values were obtained in the case of two plants. The increase in saccharinity of 0.4% obtained by introducing PK as additional top dressing, when the plants are disposed in a square, is worth consideration. The experimental was carried out at the Voronezh Agricultural Institute. -- N. I. Orlovskiy

VODOLAZHCHENKO, Yu.T.; BELOUS, D.A.; GOLUBCHIK, S.F.; LINCHEVSKIY, V.V.; PERETRUTOV, V.L.; YAKIMENKO, I.A.; CHICHEVA, L.I., red.;

[Dismantling and assembling the DT-20 tractor] Razborka i sborka traktora DT-20. Moskva, "Kolos," 1964. 174 p. (MIRA 17:8)

88159

S/109/60/005/011/008/014
E140/E483

9,1300

AUTHORS: Bulgakov, B.M., Shestopalov, V.P., Shishkin, L.A. and Yakimenko, I.P.

TITLE: Symmetrical Surface Waves in a Helical Waveguide Immersed in a Ferrite Medium

PERIODICAL: Radiotekhnika i elektronika, 1960, Vol.5, No.11, pp.1818-1827

TEXT: Suhl and Walker (Ref.3) have considered the dispersion properties of a helical waveguide with external ferrite medium in the presence of a constant transverse magnetic bias. The dispersion equations of such a system contain modified Bessel functions as well as Laguerre or Whittaker functions which complicates the analysis of the characteristic equations. If the magnetic bias field is parallel to the axis of the system, the longitudinal field components in the ferrite and free space are expressed by the modified Bessel functions. The dispersion equation can be analysed more fully therefore than in the case of transverse bias. The article derives the dispersion equation of a helical waveguide placed in a cylindrical cavity in an infinite ferrite medium. In cylindrical coordinates, the waveguide passes

Card 1/2

88159
S/109/60/005/011/008/014
E140/E483

Symmetrical Surface Waves in a Helical Waveguide Immersed in a Ferrite Medium

in a radial direction. It is assumed that slow axially-symmetrical waves propagate in the system. The following special cases are considered: small gyrotropicity, large magnetic bias field, the system close to resonance and low magnetic permeability. The dispersion equations here derived are solved by a method of successive approximations. The dispersion curves for various values of the system parameters are given. The article concludes with the calculation of the power flux distribution in the system. There are 6 figures and 12 references: 9 Soviet (one of which is a translation from English) and 3 non-Soviet.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet
im. A.M.Gor'kogo
(Khar'kov State University imeni A.M.Gor'kiy)

SUBMITTED: December 10, 1959

Card 2/2

BULGAKOV, B.M., SHESTOPALOV, V.P., SHISHKIN, L.A., YAKIMENKO, I.P.

Slow waves in a spiral wave guide with plasma. Zhur. tekh. fiz. 30 no.7:840-850 Jl '60. (MIRA 13:8)

1. Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo.
(Wave guides) (Plasma (Ionized gases))

9,1300 (1nc/3301; 2/50/1130)

21432
S/109/61/006/001/010/023
E140/E163

AUTHORS: Bulgakov, B.M., Shestopalov, V.P., Shishkin, L.A., and Yakimenko, I.P.

TITLE: Unilateral wave propagation in helical waveguide immersed in ferrite medium

PERIODICAL: Radiotekhnika i elektronika, Vol.6, No.1, 1961, pp. 81-91

TEXT: The authors consider the previously observed but not satisfactorily explained phenomenon of directive propagation in a system consisting of a helix surrounded by a ferrite medium with an applied constant axial magnetic field. The actual directivity observed of 6:1 (Ref.2: J.A. Rich, S.E. Weber, Proc. I.R.E., 1955, 43, 1, 100) is higher than that predicted by elementary theory, which determines the degree of directivity from the eccentricity of the magnetic field vector ellipse in the plane perpendicular to the constant magnetic field. Rich and Weber (Ref.2) proposed that the divergence between the experimental results and the predictions of the elementary theory are caused by the influence of the ferrite permeability on the magnetic

Unilateral wave propagation in ...

vector ellipse eccentricity. The present authors have previously (Ref.3) published an electrodynamic solution of the problem for lossless systems. The present note solves the same problem for systems with dielectric and magnetic losses having a ferro-resonant character. The analysis predicts directivities of up to 8:1, a result useful for the design of ferrite attenuators for TWT-amplifiers. On the basis of the formulae obtained curves have been calculated which permit the following conclusions. (1) The directivity has a maximum in the neighbourhood of a resonant frequency, of the order of 8:1. (2) The dependence of attenuation of magnetization for a given magnetic field is weak. (3) At frequencies equidistant from resonance the attenuation increases as the magnetic field decreases. (4) In the presence of high dielectric losses frequency bands are possible in which the backward attenuation is lower than the forward attenuation. Thus the dependence of attenuation ratio and of absolute attenuation on the dielectric loss have the same character. It is necessary to take ferrites with the lowest possible dielectric loss.

Card 2/3

S/109/61/006/001/010/023
E140/E163

Unilateral wave propagation in ...

There are 5 figures and 5 references: 3 Soviet and 2 English.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo
(Khar'kov State University imeni A.M. Gor'kiy)

SUBMITTED: February 15, 1960

Card 3/3

22903

S/109/61/006/004/018/025
E032/E514

9,9000

AUTHORS: Shestopalov, V.P. and Yakimenko, I.P.

TITLE: On the Attenuation of Slow Electromagnetic Waves in a Plasma Rod Located in the Longitudinal Magnetic Field

PERIODICAL: Radiotekhnika i elektronika, 1961, Vol. 6, No. 4, pp. 653 - 654

TEXT: The dispersion equation for a plasma rod in a longitudinal magnetic field was investigated by Faynberg and Gorbatenko (Ref. 1) without taking losses into account. This equation was obtained by Bulgakov et al in Ref. 2, and is of the following form

$$\varepsilon_z f \frac{I_{11} I_{12}}{I_{01} I_{02}} + \frac{\sqrt{f_0}}{2 f_1 \sqrt{\varepsilon}} \left\{ [\varepsilon_z - 1 + (\varepsilon_z + 1) f_1] f_+ \frac{I_{11}}{I_{01}} - \right.$$

$$\left. - [\varepsilon_z - 1 - (\varepsilon_z + 1) f_1] f_- \frac{I_{12}}{I_{01}} \right\} \frac{K_{10}}{K_{00}} + \frac{f_- f_+}{|\varepsilon|} \frac{K_{10}^2}{K_{00}^2} = 0, \qquad (1)$$

Card 1/8

On the Attenuation ....

where

$$f_0 = 1 - \frac{1}{m^2}; \quad f_1 = \sqrt{1 + \frac{4\varepsilon_z}{m^2\alpha^2 f_0^2}}; \quad \psi_\pm = \sqrt{\varepsilon_z\left(1 - \frac{\varepsilon}{m^2}\right) + \frac{\varepsilon - \varepsilon_z}{2} f_0 (1 \pm f_1)}; \qquad (2)$$

$$I_{lk} = I_l(\gamma_k a); \quad K_{lk} = K_l(\gamma_k a) \quad (l = 0,1; \quad k = 0, 1, 2); \quad \gamma_0 = \beta\sqrt{f_0}; \quad \gamma_{1,2} = \frac{\beta f_\pm}{\sqrt{\varepsilon}};$$

In these equations $\beta = \omega/v_\Phi$ is the longitudinal propagation constant,

$m = c/v_\Phi$

ε and ε_z are the components of the dielectric constant tensor,

$\alpha = \omega_H/\omega$, where ω is the frequency of the signal, and

ω_H is the gyro-frequency,

v_Φ is the phase velocity.

Card 2/8

c is the velocity of light in vacuum,
a is the radius of the plasma rod,
$I_o(x)$ and $K_o(x)$ are the modified Bessel functions of the first and second kind.

Eq. (1) can be used to determine the dispersion of slow electromagnetic waves. It holds in the shaded region of Fig. 1. This region is bounded by the curves $\varepsilon_z = 0$, $\varepsilon\varepsilon_z = 1$ and $(\ell\sigma)^2 = 2(\sigma - 1)/(\sigma - 2)$ where $\ell = \omega_o/\omega$ and ω_o is the Langmuir plasma frequency. If the attenuation of the waves is not too large, then the various terms in Eq. (1) can be expended and only the linear terms retained. For $m > 10$, the dispersion equation assumes the following simple form

Card 3/8

On the Attenuation ...

$$\sqrt{\varepsilon'\varepsilon_z'} = \frac{I_0\left(\beta'\sqrt{\frac{\varepsilon_z'}{\varepsilon'}}a\right)K_1(\beta'a)}{I_1\left(\beta'\sqrt{\frac{\varepsilon_z'}{\varepsilon'}}a\right)K_0(\beta'a)}, \qquad (3)$$

while the losses are determined by

$$\beta''a = \frac{\frac{\varepsilon'\varepsilon_z'' + \varepsilon_z'\varepsilon''}{2\sqrt{\varepsilon'\varepsilon_z'}}\frac{I_1}{I_0} + \frac{\beta'a}{2|\varepsilon'|}(\varepsilon_z''\varepsilon' - \varepsilon''\varepsilon_z')\left(\frac{I_1}{I_0}\right)}{\left(\frac{K_1}{K_0}\right)' - |\varepsilon_z'|\left(\frac{I_1}{I_0}\right)'}, \qquad (4)$$

where

Card 4/8

S/109/61/006/004/018/025
E032/E314

'On the Attenuation ....

$$\varepsilon' = 1 + \frac{(l\sigma)^2}{\sigma^2 - 1}; \qquad \varepsilon'' = \frac{\left(1 + \frac{1}{\sigma^2}\right) l^2 \sigma\delta}{\left(1 - \frac{1}{\sigma^2}\right)^2};$$

$$\varepsilon_z' = 1 - (l\sigma)^2; \qquad \varepsilon_z'' = l^2\sigma^2\delta; \quad \delta = \frac{\nu}{\omega_H}; \qquad (5)$$

In these relations ν is the effective collision frequency in the plasma, and $(I_1/I_0)'$, $(K_1/K_0)'$ are the derivatives of the Bessel function ratios with respect to the argument.

The arguments of the functions I_1 and K_1 are respectively equal to $\beta'\sqrt{\varepsilon_z' a/\varepsilon'}$ and $\beta' a$. The expressions in Eq. (5) will hold if the working frequency is very different from the gyrofrequency ($\sigma \neq 1$). These formulae are shown graphically in Figs. 2 and 3.

Card 5/8

S/109/61/006/004/018/025
E032/E314

On the Attenuation ....

There are 3 figures and 2 Soviet references.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo (Khar'kov State University im. A.M. Gor'kiy)

SUBMITTED: September 9, 1960

Card 6/8

S/058/63/000/003/088/104
A059/A101

AUTHOR: Yakimenko, I. P.

TITLE: Electromagnetic waves in a helical waveguide with a gyrotropic medium

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 26 - 27, abstract 3Zh159 ("Uch. zap. Khar'kovsk. un-t", 1962, v. 121, Tr. Radiofiz. fak., v. 5, 5 - 18)

TEXT: The problem of nonmutual effects in a helical waveguide with gyrotropic filling is studied at a longitudinal magnetization. The case is considered in detail when the magnetized plasma is outside the helical waveguide. A characteristic equation was obtained when usual conditions at the boundary of the spiral and the medium are fulfilled. It is shown that the separation of the equation into a real and an imaginary part can be performed only in the case when the losses are small. A number of simplifications is performed on the equation which are correct far away from gyromagnetic and plasma resonances, and then its solution is sought for by the method of successive approximations. The dispersion curves for different types of waves and waveguide parameters are

Card 1/2

Electromagnetic waves in a...

given. It is shown that an analogous solution can be obtained for ferrite, and the curves for this case are plotted. It has been established that ferrite can secure a higher orientation coefficient than plasma. The power distribution in the helix inside the ferrite was investigated, and it was shown that this distribution is considerably more efficient than in systems with dielectrics.

G. Postnov

[Abstracter's note: Complete translation]

S/141/62/005/001/020/024
E039/E485

3,2600

AUTHORS: Shestopalov, V.P., Yakimenko, I.P., Fil', V.D.

TITLE: The propagation of unsymmetrical electromagnetic waves in a plasma column and their radiation

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika, v.5, no.1, 1962, 176-179

TEXT: The dispersion equation is derived for the propagation of unsymmetrical electromagnetic waves in a plasma column with a longitudinal magnetic field. The solution to this equation is presented graphically and shows the various regimes of propagation and cut off frequencies. The dispersion curves calculated from this dispersion equation are also shown graphically. The phase velocities of waves of different types depend strongly on the frequency, the plasma parameters and the longitudinal magnetic field. A normal and an anomalous dispersion is indicated. Approximate polar diagrams are calculated for dense plasmas in a magnetic field. These polar diagrams are symmetrical with respect to the axis. Numerical calculations made for waves with an index n = 1 show that the

Card 1/2

shape of the polar diagram is strongly dependent on the frequency and that the direction of maximum radiation depends on the strength of the magnetic field. There are 3 figures.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet
(Khar'kov State University)

SUBMITTED: June 17, 1961

Card 2/2

S/141/62/005/001/021/024
E039/E435

9,2571

AUTHORS: Shestopalov, V.P., Yakimenko, I.P., Prokhoy, V.V.

TITLE: Non-symmetrical electromagnetic waves in a spiral waveguide with longitudinally magnetized ferrites

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Radiofizika, v.5, no.1, 1962, 179-183

TEXT: The dispersion equation is derived for this case and compared with the n-th propagation resonance. The form of the wave spectrum is shown graphically for two values of u where $u = w_H a/c$ (w_H is the gyrofrequency, a is the radius of the spiral), indicating the regions where slow and fast waves are propagated and also the regions of no propagation. Dispersion curves are obtained by graphical analysis before and after resonance for the case when the direction of wave propagation coincides with the direction of the magnetic field and also the converse of this. The direction of the magnetic field influences the phase velocity of the waves. The distribution of the flux density for various types of waves is calculated using the usual expression for flux density of monochromatic waves

Card 1/2

along the z axis. As there is strong dispersion in this particular system the results are only qualitative and, in order to obtain more accurate results, it is necessary to use the quasi-monochromatic approximation. The calculation shows that most of the wave propagation occurs inside the spiral (in the ferrite). This is in agreement with the fact that the phase velocity of these waves is only very weakly dependent on ctg θ. For the usual slow waves a large part of the flux distribution is outside the spiral. There are 3 figures.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet
(Khar'kov State University)

SUBMITTED: June 17, 1961

35883
S/109/62/007/003/026/029
D256/D302

9.1911 (1137)

AUTHORS: Shestopalov, V.P., Yakimenko, I.P., and Zdorovik, V.Ya.

TITLE: Electromagnetic wave radiation of a helix-ferrite antenna

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 3, 1962, 566 - 567

TEXT: Electromagnetic radiation and its dependence upon the magnetic field applied along the axis of the helix are considered using the Huyghens-Kirchhoff principle. General equations are set up using the initial conditions obtained by solving the problem of nonsymmetrical wave propagation along an infinite helix wound round a ferrite rod to derive the fields and the phase velocities at the surface of the antenna. Directional diagrams of the antenna are presented, showing that with a change of the magnetic field the main maximum splits into two maxima symmetrical with respect to the axis. There are 2 figures and 4 Soviet-bloc references.

Card 1/2

S/109/62/007/003/026/029
D256/D302

Electromagnetic wave radiation ...

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A.M. Gor'kogo (Khar'kov State University im. A.M. Gor'kiy)

SUBMITTED: June 15, 1961

Card 2/2

40940

S/109/62/007/007/008/018
D266/D308

9.4230 (also 3301)

AUTHORS: Yakimenko, I. P. and Shestopalov, V. P.

TITLE: An experimental investigation of the helix-ferrite waveguide

PERIODICAL: Radiotekhnika i elektronika, v. 7, no. 7, 1962, 1115-1122

TEXT: Two configurations are studied: (1) ferrite cylinder inside the helix, (2) ferrite surrounding the helix. Helix and ferrite are in both cases placed in a coil producing homogeneous axial magnetic field. The voltage standing wave ratio (a function of frequency) was kept below the value 1.5. Since the phase velocity of the forward and backward propagating waves is different, the wavelength could not be determined from the measured standing wave ratio but was obtained by comparing the signal from a moving probe with that (through attenuators) from the signal generator. The measurements were performed at decimeter wave-lengths varying the magnetic field between 150 and 1000 oersted. The dielectric con-

Card 1/3

An experimental investigation ...

stant of the ferrite employed was $\varepsilon \cong 9$. The conclusions are as follows: If the helix is in the ferrite jacket the forward wave is more attenuated; if the ferrite is in the helix the attenuation is larger for the backward wave. This agrees with the corresponding conclusions of B. M. Bulgakov, V. P. Shestopalov, L. A. Shishkin and I. P. Yakimenko (Radiotekhnika i elektronika, 1961, v. 6, no. 1, 81) and can be physically explained with the fact that the direction of rotation of the a.c. magnetic field (perpendicular to the d.c. magnetic field) depends on the relative position of helix and ferrite. If the ferrite is outside the helix, the elliptic polarization is negative (in accordance with earlier work), which makes the attenuation larger for the forward wave. The ratio of forward and backward attenuation can be influenced by the choice of the gap between helix and ferrite but the introduction of the gap increases the attenuation in both directions. The authors believe that filling the gap with dielectric can further improve the non-reciprocal character. Increasing the spacing between the turns, the absolute level of the losses decreases, which is due to the fact that the proportion of surface waves decreases. The phase

Card 2/3 * S/109/61/006/001/010/023

velocity of the forward and backward wave was found to be different and the difference increased as the magnetic field approached the value for ferromagnetic resonance. The phase velocity for both waves is smaller than that for the equivalent system filled with dielectric, which is again in agreement with the earlier theoretical work. There are 6 figures.

ASSOCIATION: Khar'kovskiy gosudarstvennyy universitet im. A. M. Gor'kogo (Khar'kov State University im. A. M. Gor'kiy)

SUBMITTED: October 14, 1961

4

L 16854-63 EWT(d)/EEC-2/BDS/ES(t)-2 AFFTC/ASD/ESD-3/APGC Pg-4/
P1-4

ACCESSION NR: AR3006321 S/0058/63/000/007/H023/H023

67

SOURCE: RZh. Fizika, Abs. 7Zh150

AUTHOR: Yakimenko, I.P.

TITLE: Some features of propagation of electromagnetic waves in a helix--ferrite medium system

CITED SOURCE: Uch. zap. Khar'kovsk. un-t, v. 127, Tr. Radiofiz. fak., v. 6, 5-11

TOPIC TAGS: slow wave system, ferrite, wave propagation

TRANSLATION: The coefficient of irreversibility (the ratio of damping upon wave propagation in opposite directions) is calculated for a system consisting of a helix and a ferrite medium, for the case when the helix is wound on a ferrite rod and when it is contained in a ferrite enclosure. The calculation has been made for the

Card 1/2

L 16854-63
ACCESSION NR: AR3006321 0

case of small losses. It is shown that for not very high frequencies and for not too large slowing-down ratios, the irreversibility coefficient is considerably higher if the helix is inside a ferrite cylinder. For high frequencies and for large slowing-down ratios, the influence of the location of the ferrite is practically nil. The directivity coefficient can be increased by introducing a gap of dielectric material between ferrite and the helix, for in this case the polarization of the wave will be closer to circular. The results of the calculations agree with experiment. Ye. Lebedeva.

DATE ACQ: 15Aug63 SUB CODE: GE, SD ENCL: 00

Card 2/2

ACCESSION NR: AP4039737 S/0141/64/007/002/0375/0378

AUTHOR: Yakimenko, I. P.

TITLE: Scattering of electromagnetic waves by fluctuations in a plasma waveguide

SOURCE: IVUZ. Radiofizika, v. 7, no. 2, 1964, 375-378

TOPIC TAGS: plasma electromagnetic wave, electromagnetic scattering, magnetoactive plasma, dispersion statistics, electromagnetic theory

ABSTRACT: The author obtains the correlation functions of the fluctuation electric field in a plasma waveguide of finite radius and determines the differential coefficient of scattering of electromagnetic waves by charge-density fluctuations. The problem is solved for symmetrical E modes and is based on the general theory of electromagnetic fluctuations. It is indicated that the solution method can also be applied to a magnetoactive plasma, but the results are

Card 1/2

ACCESSION NR: AP4039737

exceedingly cumbersome, and spatial dispersion must be taken into account. "I am grateful to A. G. Sitenko for guidance and help in the work and to Ya. B. Faynberg for valuable remarks." Orig. art. has: 18 formulas.

ASSOCIATION: Khar'kovskiy gosudarstvenny*y universitet (Khar'kov State University)

SUBMITTED: 27May63 DATE ACQ: 19Jun64 ENCL: 00

SUB CODE: ME, EC NR REF SOV: 004 OTHER: 001

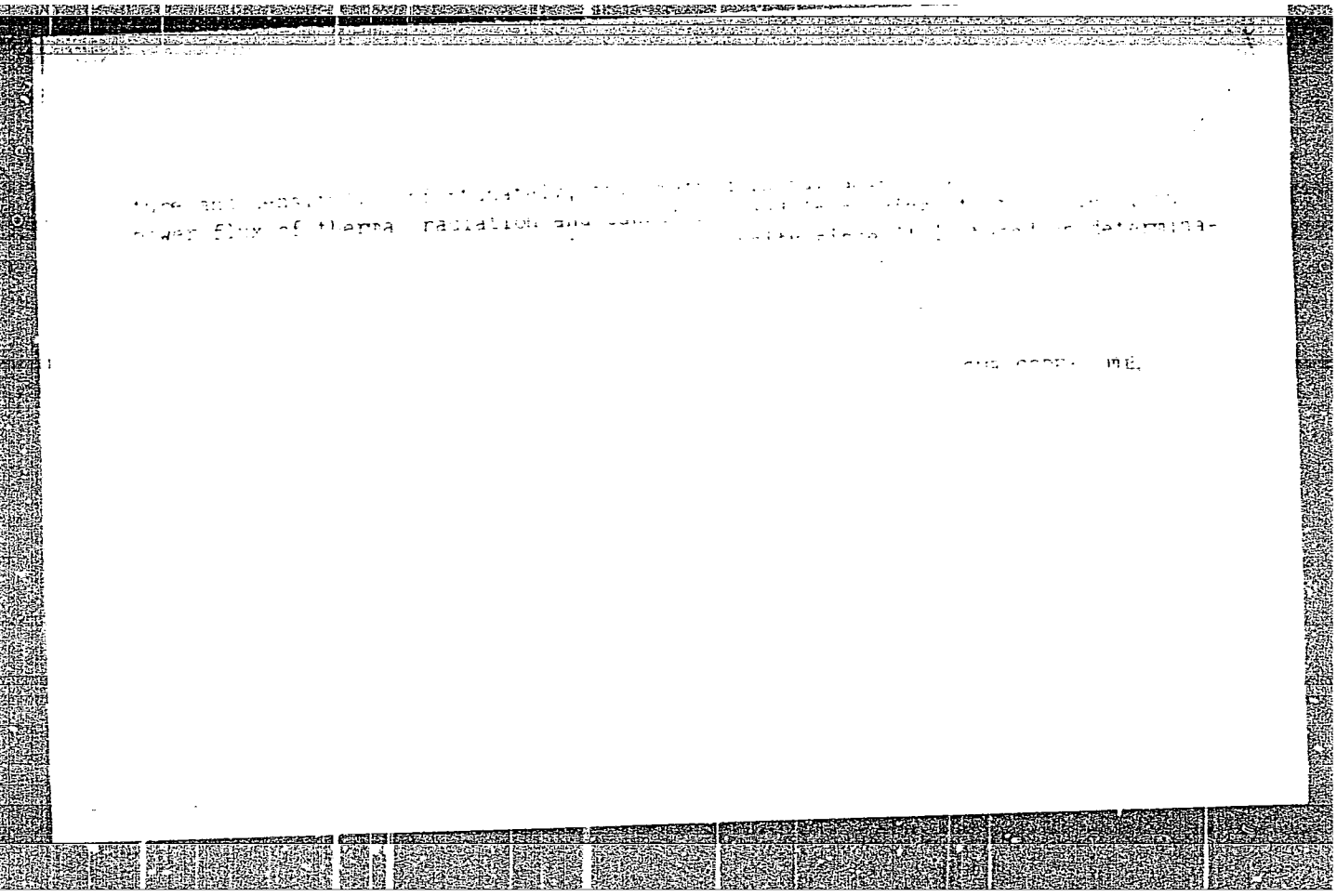
Card 2/2

AUTHOR: Yakimenko, I. P.

TITLE: Thermal radiation of a plasma cylinder

SOURCE: IVUZ. Radiofizika, v. 8, no. 3, 1965, 476-484

Card



AUTHOR: Yakimenko, I. P.

TITLE: Attenuation of electromagnetic waves in a helical waveguide with magnetoactive plasma

SOURCE: Radiotekhnika i elektronika, v. 9, no. 11, 1964, 1968-1975

TOPIC TAGS: electromagnetic wave, helical waveguide

ABSTRACT: The attenuation of waves propagating in a plasma-filled helical waveguide is theoretically and experimentally investigated. The theory is based on the findings of B. M. Bulgakov, et al. (ZhTF, 1960, 30, 7, 841) and consists of a solution of the electrodynamic problem and development of design formulas. The attenuation of waves in the waveguide [illegible] an external magnetic field is theoretically determined. The attenuation of axisymmetric waves

velocity critically depend on the frequency and external magnetic field, with a

Card 1/2

L 19431-65

ACCESSION NR: AP4048881 4

doubled field, the attenuation varies by 30 times while with a frequency variation of 1.6 times, the attenuation varies 100-fold. This is explained by the resonant nature of the dielectric constant of the magnetoactive plasma. Other data given. The experimental verification included a 12-mm-diameter glass tube wound over by a 20-cm-long wire helix; the gas-discharge plasma was generated by a high voltage (up to 10 kv) applied to the electrodes with a pressure of 0.01—0.001 torr inside the tube. ' The author wishes to thank V. P. Shestopalov for his guidance and help in the project, and I. D. Fil' and Yu. V. Shavory*kin who took part in the experiments.' Orig. art. has: 6 figures and 20 formulas.

ASSOCIATION: Khar'kovskiy universitet (Khar'kov University)

SUBMITTED: 10Aug63 ENCL: 00

SUB CODE: EC NO REF SOV: 006 OTHER: 000

Card 2/2

L 27568-66 EWP(n)-2/EWT(1)/ETC(f)/EWG(m) IJP(c) AT/WW

ACC NR: AP6007628 SOURCE CODE: UR/0141/66/009/001/0033/0038

AUTHOR: Yakimenko, I. P.

ORG: Khar'kov State University (Khar'kovskiy gosudarstvennyy universitet)

TITLE: Resonances of fluctuation radiation of a plasma cylinder

SOURCE: IVUZ. Radiofizika, v. 9, no. 1, 1966, 33-38

TOPIC TAGS: plasma, fluctuation radiation, heat radiation

ABSTRACT: This is a further development of an earlier author's work (IVUZ-Radiofizika, v. 8, 476, 1965) where the spectral distribution was calculated of density of radial heat radiation of a plasma cylinder. The present article offers formulas for the resonances of heat radiation of a plasma cylinder with and without the magnetic field; positive and negative harmonics (modes) and a homogeneous cylinder are considered. The results may be used for plasma diagnosis: the charged-particle concentration and temperature of plasma can be determined from known resonance frequencies and absolute power level at resonance. Orig. art. has: 40 formulas.

SUB CODE: 20/ SUBM. DATE: 12Jul65 / ORIG REF: 004 / OTH REF: 002

Card 1/1 UDC: 533.93

L 33407-66 EWT(1)/ETC(f) IJP(c) AT
ACC NR: AP6015308 (A, N) SOURCE CODE: UR/0057/66/036/005/0868/0876

AUTHOR: Yakimenko, I. P.

ORG: Kharkov State University im A.M. Gor'kiy (Khar'kovskiy gosudarstvennyy universitet)

TITLE: Oscillations of an inhomogeneous plasma cylinder

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 5, 1966, 868-876

TOPIC TAGS: plasma waveguide, dispersion equation, isotropic plasma, inhomogeneous plasma, mathematic method

ABSTRACT: A technique is described for calculating the conditions for propagation of E modes in an isotropic plasma waveguide of circular cross section in which the Langmuir frequency is a function of the distance from the axis. Such a technique is very desirable because experimentally realized plasma columns are practically always inhomogeneous in the radial direction. The plasma cylinder is divided into an arbitrary but finite number of cylindrical shells within each of which the plasma is homogeneous. The fields within each shell are expressed linearly in terms of modified Bessel functions of the first and second kinds and zeroth and first orders, and recurrence relations from which the coefficients in these expressions can be calculated are derived from the boundary conditions on the axis, at infinity, and on the surfaces be-

Card 1/2

UDC: 533.9

L 33407-66

ACC NR: AP6015308

tween the several shells. These recurrence relations are relatively simple and are suitable for solution with a computer. The dispersion equation can be found with the aid of the recurrence relations. In the case of an inhomogeneous plasma waveguide there are a number (or a whole spectrum) of "cut-off" (absorption) frequencies; the present technique enables these to be calculated. The following simple cases are discussed by way of examples: a uniform cylindrical plasma waveguide; a plasma waveguide in a glass container, and a plasma waveguide on which there is formed a Langmuir layer in which the dielectric constant is unity. In the last case there occurs anomalous dispersion, and this is discussed. The technique as developed in the present paper is applicable only to a cold plasma; it would be desirable to modify the technique so as to make it possible to take account of the effects of the thermal motions of the plasma electrons. Orig. art. has: 51 formulas.

SUB CODE: 20/ SUBM DATE: 08Jul65/ ORIG REF: 009/ OTH REF: 009

Card 2/2 JS

KARPENKO, P.V.; YAKIMENKO, I.Ya.; GONCHAROV, G.A.

Mechanization of labor-consuming processes involved in the growing of sugar-beet seeds. Sakh.prom. 34 no.8: 58-59 Ag '60. (MIRA 13:8)

1. Voronezhskiy sel'skokhozyaystvennyy institut (for Karpenko, Yakimenko). 2. Mikhaylovskiy sveklosovkhoz (for Goncharov).
(Sugar beets)

L 02401-67 EWT(1) IJP(c) GG/AT/GD

ACC NR: AT6022329 SOURCE CODE: UR/0000/66/000/000/0028/0033

53
B+1

AUTHOR: Krepak, V. N.; Yakimenko, I. Ya.

ORG: None

TITLE: Electromagnetic waves in a nonhomogeneous plasma cylinder

SOURCE: Vsesoyuznaya nauchnaya sessiya, posvyashchennaya Dnyu radio. 22d, 1966. Sektsiya rasprostraneniya radiovoln. Doklady, Moscow, 1966, 28-33

TOPIC TAGS: inhomogeneous plasma, plasma electromagnetic wave, wave propagation, dielectric property

ABSTRACT: The authors consider some of the discrepancies between the conclusions of the theory for propagation of electromagnetic waves in a uniform plasma cylinder and experimental data with actual plasma columns. It is pointed out that one of the reasons for these experimental deviations may be the fact that actual plasma columns are not always homogeneous. While a direct solution of the electrodynamic boundary problem for propagation of surface E-waves in a nonhomogeneous dielectric cylinder involves considerable mathematical difficulties, the problem may be approached by assuming a laminar approximation for the dielectric. The dispersion equation

$$\Gamma_{N+1} = 0,$$

Card 1/3

where Γ_i is determined with the aid of the recurrence formulas

$$\Gamma_{i+1} = \gamma_i \Gamma_i + \beta_i \Gamma'_i, \quad \Gamma'_{i+1} = \overline{\gamma}_i \Gamma'_i + \alpha_i \Gamma_i,$$

and

$$\Gamma'_0 = 0, \quad \Gamma_0 = 1.$$

is solved on a computer for the following distributions of plasma density with respect to radius:

1) linear $n = n_0 (1 - br)$,

2) quadratic $n = n_0 \left[1 - \alpha \left(\frac{r}{a}\right)^2\right]$, $\alpha = 0{,}7$,

3) Gaussian $n = n_0 e^{-b^2 r^2}$,

4) $n = n_0 I_0 \left(\frac{2{\cdot}405\, r}{a}\right)$ (ambipolar diffusion).

Calculations of the phase velocity of surface waves in a plasma cylinder as a